



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,998	01/15/2002	Christopher Frederick Bayne	6001-1001	4386

466 7590 03/08/2004

YOUNG & THOMPSON  
745 SOUTH 23RD STREET 2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
----------	--------------

3676

DATE MAILED: 03/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/030,998

Applicant(s)

BAYNE, CHRISTOPHER  
FREDERICK

Examiner

Alison K. Pickard

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12,13 and 15-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21,23 and 24 is/are allowed.
- 6) ☒ Claim(s) 12,13,15,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 16-18 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12, 13, 15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Budzich (4,353,559).

Budzich discloses an apparatus and method for providing a seal between first and second relatively rotatable parts of a mechanism wherein pulverulent material is entrained in a fluid (i.e. air/gas). A first element 60 is mounted on the stationary part, and a second element 62 is mounted on the rotating part. The first and second elements have projections and recesses with interfacing surfaces that define a passage (see Fig. 4) having a clearance. The initial clearance is substantially greater than the material in the fluid. The pulverulent material enters the passage and is deposited in layers (see col. 3, lines 17-30), thus forming a labyrinthine passage smaller than the clearance and restricting flow of the fluid.

3. Claims 12, 13, 15, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Solomon (5,676,472).

Solomon discloses an apparatus and method of providing a seal between first and second rotatable parts. A first element 150 is mounted on a stationary part 88, and a second element 152 is mounted on a rotating part 87. The first and second elements have projections and recesses with interfacing surfaces that define a passage having a clearance. The initial clearance is

Art Unit: 3676

substantially greater than the material 146 entrained in the fluid (i.e. liquid). The pulverulent material enters the passage and is deposited in layers (see Figs.), thus forming a labyrinthine passage smaller than the clearance and restricting flow. It is considered inherent that the material would build up over time so that no further material can flow through.

***Allowable Subject Matter***

4. Claims 21, 23, and 24 are allowed.
5. Claims 16-18 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed 12-15-03 have been fully considered but they are not persuasive.

Solomon has been provided to show the labyrinth seal when the fluid is a liquid. Both Solomon and Budzich (as well as other cited prior art) disclose a labyrinth seal that allows material in a fluid to build up in layers and restrict fluid flow. The examiner disagrees with applicant's argument that Budzich does not teach the build of particles in layers. Any particle more than one, is considered a "layer". Further, even though the build up of material in Budzich will eventually wear and enlarge the spacing between the members, Budzich still reads on the claimed invention. Until that point, the particles will build, thereby narrowing the passage to restrict any further particles or flow (thus meeting the claim language). This characteristic is inherent in labyrinth seals (as acknowledged in Applicant's declaration).


Art Unit: 3676

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 703-305-0882. The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Alison K. Pickard  
Primary Examiner  
Art Unit 3676

AP